

NOV'O 4 2005

HE WITED STATES PATENT AND TRADEMARK OFFICE

Serial No	09/892,924
	6/26/2001
	3839
	Peter-Pike J. Sloan
Applicant	Microsoft Corporation
Group Art Unit	2671
Examiner	KIMBINH T NGUYEN
Attorney's Docket No.	MS1-0791US
Title: Interactive Horizon Mapping	

**INFORMATION DISCLOSURE STATEMENT** 

References -- See Attached Form PTO-1449

## **REMARKS**

The citations listed, copies attached, are submitted in compliance with the duty of disclosure defined in 37 CFR §1.56. The Examiner is requested to make these citations of official record in this application.

Respectfully Submitted,

Date: 11-4-05

David S. Thompson Reg. No. 37954

PTO/SB/08A (08-03)

Approved for use through 07/31/2006. OMB 0651-0031 U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the aperwork R Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

## INFORMATION DISCLOSURE STATEMENT BY APPLICANT

NOV 0 4 2005

Substitute for form 1449/PTO

Sheet 1

(Use as many sheets as necessary)

of 3

Complete if Known				
Application Number	09/892,924			
Filing Date	6/26/2001	•		
First Named Inventor	Peter-Pike J. Sloan			
Art Unit	2671			
Examiner Name	KIMBINH T NGUYEN			
Attorney Docket Number	MS1 0791US			

			U. S. PATEN	DOCUMENTS	
Examiner Initials*	Cite No.1	Document Number  Number-Kind Code <sup>2 (d known)</sup>	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		<sup>US-</sup> 20010033284	10/25/2001	Chan	
		<sup>US-</sup> 20010056575	12/27/2001	Wei, et al.	7
		US- 20020033837	3/21/2002	Munro	
		<sup>US-</sup> 5,490,246	2/6/1996	Brotsky, et al.	
		<sup>US-</sup> 6,297,833	10/2/2001	Ho, et al.	
		US-			
		US-		1	
		US-			
		US-		<u> </u>	
		US-			

	FOREIGN PATENT DOCUMENTS							
Examiner Initials*	niner Cite Foreign Patent Document .		Publication Date	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages			
		Country Code <sup>3</sup> Number <sup>4</sup> Kind Code <sup>5</sup> (if known)	MM-DD-YYYY		Or Relevant Figures Appear	T		
						L		
						┡		
	<u>.</u>	•				Ļ		
						╄		
·	<u> </u>					上		
		,						

Examiner	Date	
Signature	Considered	

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. <sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> See Kinds Codes of USPTO Patent Documents at <a href="https://www.uspto.gov">www.uspto.gov</a> or MPEP 901.04. <sup>3</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup>Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. <sup>6</sup> Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.

PTO/SB/08B (08-03)

Approved for use through 07/31/2006. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number. Under the Paperwork Reduction

Substitute for form 1449/PTO		Complete if Known
- Casalia (a. 1311)	Application Number	09/892,924
INFORMATION DISCLOSURE	Filing Date	6/26/2001
STATEMENT BY APPLICANT	First Named Inventor Peter-Pike J. Sloan	
(Has an many about an managemy)	Art Unit	2671
(Use as many sheets as necessary)	Examiner Name	KIMBINH T NGUYEN
Sheet 2 of 3	Attorney Docket Number	MS1 0791US

		NON PATENT LITERATURE DOCUMENTS					
Examiner Initials*	Cite No. <sup>1</sup>	Cite Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.					
		Chapter 5: Shadow Generation Techniques, and Chapter 6: Mapping Techniques: Texture and Environment Mapping, pp. 155-201					
		Woo, et al., "A Survey of Shadow Algorithms", University of Toronto: Department of Computer Science, pp. 1-29					
		Chapter 1: Rendering Polygonal Objects, and Chapter 2: The Theory and Practice of Light/Object Interaction, pp. 3-48					
		Kautz, et al, "Bump Map Shadows for OpenGL Rendering", MPI Informatik, Feb. 2000, pp. 1-20					
<del></del>		Kautz, "Shadow Bump Maps", available at http://www.mpi-sb.mpg.de/~jnkautz/projects/shadowbumpmaps/index.html, 4 pages					
		"3D Graphics Demystified", NVIDIA Corporation, pp. 1-22, plus pp. 1-4					
		Sloan, et al, "Interactive Horizon Mapping", Microsoft Research, pp. 1-7					
		Heidrich, et al., "Illuminating Micro Geometry Based on Precomputed Visibility", Computer Graphics Proceedings, Annual Conference Series, 2000, July, 2000, pp. 455-326					
		McCool, et al., "Texture Shaders", Proceedings 1999 EUROGRAPHICS / SIGGRAPH Workshop on Graphics Hardware, August, 1999, pp. 117-126					
		Segal, et al., "Fast Shadows and Lighting Effects Using Texture Mapping", Computer Graphics, vol 26, no 2, July 1992, pp. 249-252					

П	Examiner	Date	
	Signature	Considered	

<sup>\*</sup>EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

considered. Include copy of this form with next communication to applicant.

1 Applicant's unique citation designation number (optional). 2 Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

NOV 0 4 2005

PTO/SB/08B (08-03)
Approved for use through 07/31/2006. OMB 0651-0031
U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Report of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449/PTO			Complete if Known				
Substitute for form 1445/110		Application Number	09/892,924	4			
INF	ORMATION	DIS	CLOSURE	Filing Date	Filing Date 6/26/2001		
STA	STATEMENT BY APPLICANT		First Named Inventor	Peter-Pike J. Sloan			
(Use as many sheets as necessary)		Art Unit	2671				
		Examiner Name	KIMBINH T NGUYEN				
Sheet	3	of	3	Attorney Docket Number	MS1	0791US	

		NON PATENT LITERATURE DOCUMENTS	
Examiner Initials*	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>	
		Kautz, et al., "Towards Interactive Bump Mapping with Anisotropic Shift-Variant BRDFs", Max-Planck-Institute for Computer Science, 8 pages.	
		Zhang, "Forward Shadow Mapping", University of North Carolina at Chapel Hill: Department of Computer Science, pp. 131-138.	
		Williams, "Casting Curved Shadows on Curved Surfaces", Computer Graphics, vol 12, no 3, August 1978, New York Institute of Technology: Computer Graphics Lab, pp. 270-274	
Te .	:	Blinn, "Simulation of Wrinkled Surfaces", Computer Graphics, vol 12, no 3, August 1978, Caltech/ JPL, pp. 286-292	
		Max, "Horizon Mapping: Shadows for Bump-Mapped Surfaces", The Visual Computer, 4, 1988, pp. 109-117	
		Sloan, et al., "Shadowed Bump Maps", Figures A-O, pp. 1-27	
		Heidrich, et al., "Applications of Pixel Textures in Vosualization and Realistic Image Synthesis", 1999 Symposium on Interactive 3DGraphics, pp. 127-134	
,		Heidrich, et al., "Realistic, Hardware-Accelerated Shading and Lighting", Max-Planck-Institute for Computer Science, 8 pages	

Examiner	Date	
Signature	 Considered	·

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Applicant's unique citation designation number (optional). 2 Applicant is to place a check mark here if English language Translation is attached. This collection of information is required by 37 CFR 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.